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Data in the MSMR is provisional, based on reports and other sources of data available to the Medical Surveillance Activity. Notifiable conditions are reported by date of onset (or date of notification when date of onset is absent). Only cases submitted as confirmed are included.

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Epicon report: update

Plasmodium vivax Malaria of Korean Origin, 1997

Background: *Plasmodium vivax* malaria re-emerged along the Demilitarized Zone (DMZ) in the Republic of Korea in 1993. In 1996, between June and September, twelve cases occurred among US soldiers in Korea; and at least two cases presented in the United States among soldiers who had served in Korea the previous transmission season.[1,2]

In the late summer of 1996, a multi-disciplinary Epidemiologic Consultation (EPICON) team and Army preventive medicine authorities in Korea determined that the malaria risk to US troops was confined to areas north of the Imjin River. The team provided specific recommendations regarding, for example, mosquito surveillance and control, personal protective measures, troop education, and early recognition, diagnosis, and treatment of cases. The goal of the recommended control measures was to reduce the impact of malaria on US forces who lived and trained in the high risk region.[2] 18th Medical Command implemented the recommendations for the 1997 malaria season (routine chemoprophylaxis was not recommended nor initiated). This report summarizes the recent experience of US soldiers regarding *vivax* malaria of Korean origin.

Results: Malaria continues to threaten US forces who live, train, or travel north of the Imjin River. In 1997 to date, five cases (April: 1; July: 1; Aug: 3) of *vivax* malaria have been reported among US soldiers in Korea. In addition, four cases (Fort Lewis: 2; Fort Bragg: 1; Fort Stewart: 1) have been diagnosed among soldiers who served in Korea during the 1996 malaria season. Thus, of 14 cases of malaria reported Armywide this year, nine are associated with service in Korea during 1996 or 1997.

Discussion: In healthy, nonimmune young adults, *P. vivax* of Korean origin causes a debilitating but not life threatening acute febrile illness. Korean strains of *P. vivax* have not shown resistance to standard antimalarial drugs (i.e., chloroquine, primaquine) — indeed, all recent cases among US soldiers have responded to standard treatment regimens.

Temperate-climate *vivax* malaria – which includes strains re-emerging in Korea – may have short (15-17 days) or long (6-9 months) incubation times. Thus, for example, troops infected late in a transmission season (September-October) may not clinically manifest their primary infections until the following spring or summer – when they may no longer be in Korea. Rapid diagnosis and treatment of malaria among soldiers (and recent Korean service veterans) is necessary to minimize personal debility, limit military operational disruption, and preclude the theoretical risk of autochthonous transmission in US civilian communities. Thus, it is

John F. Brundage, MD, MPH
Executive Editor

LTC Mark V. Rubertone, MD, MPH
Editor

Kimmie Kohlhase, MS
Managing Editor

Prepared by the Medical Surveillance Activity, Directorate of Epidemiology and Disease Surveillance, United States Army Center for Health Promotion and Preventive Medicine. Inquiries regarding content or material to be considered for publication should be directed to the editor, Army Medical Surveillance Activity, Bldg. T-20, Rm 213, Washington DC, 20307-5100.
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imperative that health care providers worldwide include malaria in differential diagnoses of acute febrile illnesses among soldiers who are or were (within the past year) stationed in Korea.

The figure below shows cases of malaria (by species) diagnosed in soldiers during calendar years 1993-1997 (sources: IPDS and MSS). Although malaria is acquired outside the US, most cases present for diagnosis and treatment at medical facilities in the United States.

Malaria cases among soldiers should be thoroughly investigated and expeditiously reported through the Army's automated disease reporting system (MSS). Epidemiologic assessments of *vivax* malaria cases of possible Korean origin should include dates and locations of presumed exposures (e.g., north of Imjin River); exposures — other than in Korea — during military and personal travels; personal protective measures during periods of significant exposures (e.g., DEET, permethrin, bednets, uniform wear); and, if applicable, prescribed chemoprophylactic regimens and compliance — in Korea (e.g., 1996) and elsewhere. Effective control of malaria in Korea depends significantly on Armywide efforts to detect, assess, diagnose, treat, and report all cases of Korean origin.

Information provided by Jeffrey Gunzenhauser, LTC, MC, Fort Lewis, Washington, and Brian Feighner, LTC, MC, 18th Medical Command, Korea, and Stephen Craig, LTC, MC, USACHPPM.

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2. Craig, S, Ockenhouse, C, Evans, E, Keep, L, Hewitson, W, Bell, C. Epidemiology Consultation (EPICON) Report: Malaria in the ROK. September 1996.

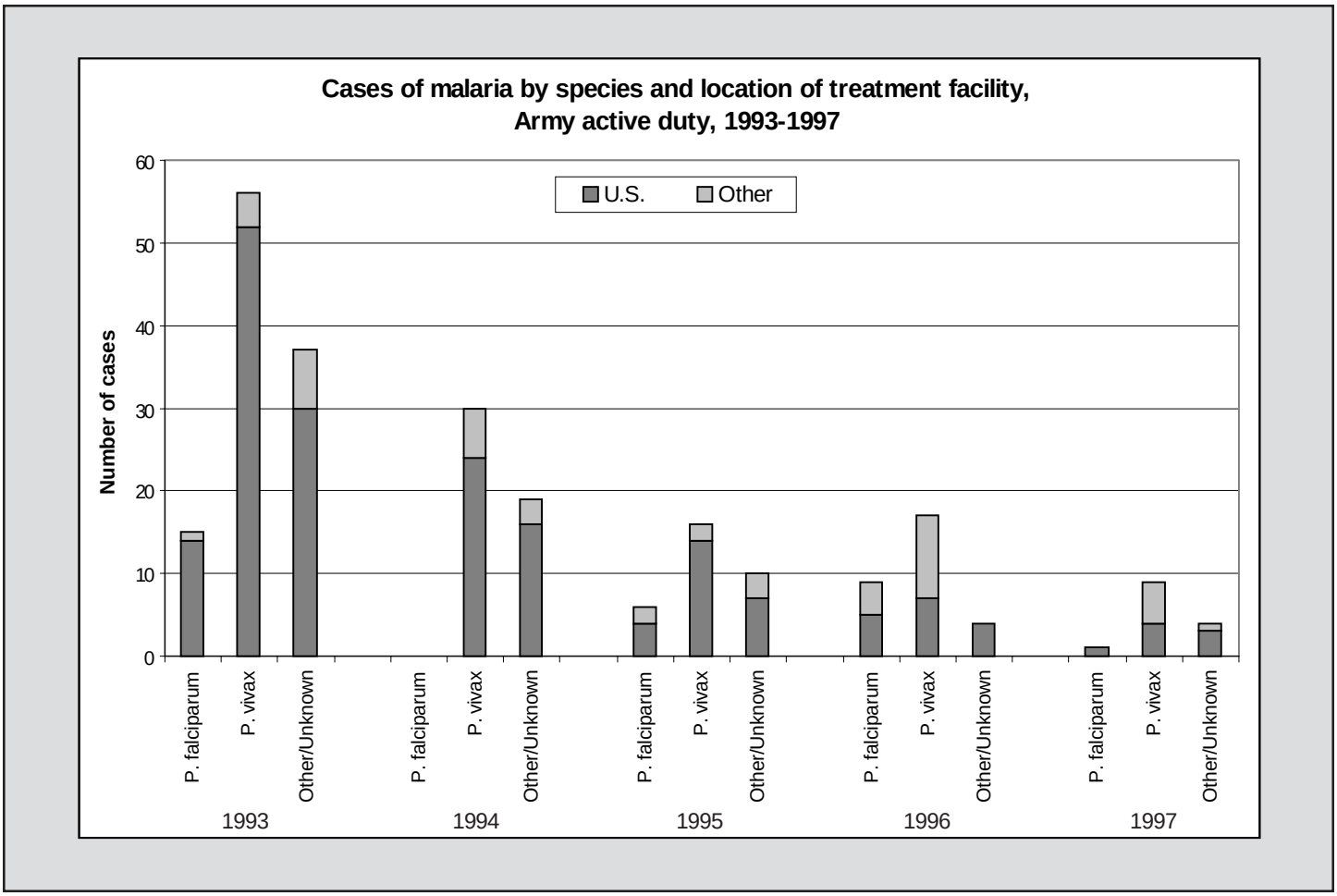


TABLE I. Selected sentinel reportable diseases, US Army medical treatment facilities* July, 1997

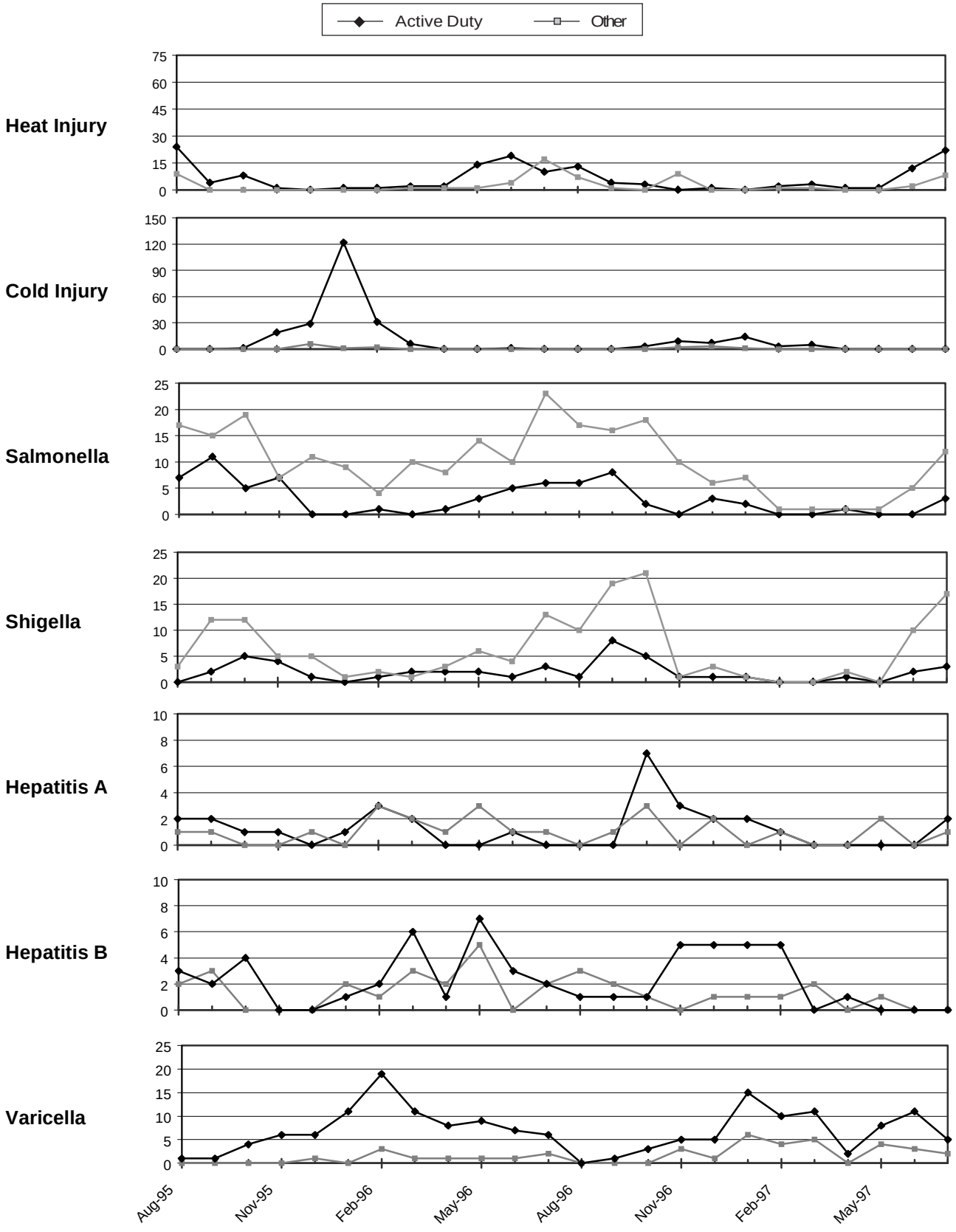
Reporting MTF/Post**	Total number of reports submitted July 1997	Environmental Injuries		Viral Hepatitis		Salmonellosis		Shigella		Varicella	
		Active Duty				Active Duty	Other	Active Duty	Other	Active Duty	Other Adult
		Heat	Cold	A	B						
		Cum. 1997	Cum. 1997	Cum. 1997	Cum. 1997	Cum. 1997	Cum. 1997	Cum. 1997	Cum. 1997	Cum. 1997	Cum. 1997
NORTH ATLANTIC RMC											
Walter Reed AMC	20	0	0	0	1	1	2	0	1	2	3
Aberdeen Prov. Ground, MD	9	1	0	0	0	0	0	0	0	0	0
FT Belvoir, VA	0	0	0	0	1	0	0	0	0	0	0
FT Bragg, NC	89	4	8	0	0	1	16	6	54	0	0
FT Drum, NY	0	0	1	0	0	0	0	0	0	4	0
FT Eustis, VA	40	7	0	1	0	0	2	0	3	3	0
FT Knox, KY	47	7	0	0	0	0	0	0	0	0	0
FT Lee, VA	0	0	0	0	0	0	0	0	0	0	0
FT Meade, MD	0	0	0	0	0	0	1	0	0	0	0
West Point, NY	0	0	0	0	0	0	0	0	0	0	0
GREAT PLAINS RMC											
Brooke AMC	3	1	0	3	0	1	1	0	4	0	0
FT Carson, CO	56	1	0	1	0	0	1	0	0	0	0
FT Hood, TX	95	0	0	2	2	0	2	0	0	2	0
FT Leavenworth, KS	5	0	0	0	1	1	0	0	0	0	0
FT Leonard Wood, MO	23	2	2	2	0	0	0	0	0	14	7
FT Polk, LA	15	7	1	0	0	0	0	0	0	0	0
FT Riley, KS	29	7	0	0	0	0	1	0	0	0	0
FT Sill, OK	0	7	0	2	3	0	0	0	0	0	0
SOUTHEAST RMC											
Eisenhower AMC	7	0	0	0	1	0	0	0	0	0	0
FT Benning, GA	43	10	0	0	0	0	0	0	0	11	1
FT Campbell, KY	51	0	13	0	0	1	2	2	0	10	5
FT Jackson, SC	75	0	0	0	1	1	1	0	0	12	0
FT McClellan, AL	1	0	0	0	0	0	0	0	0	0	0
FT Rucker, AL	20	0	0	0	0	0	0	0	0	0	0
FT Stewart, GA	205	0	0	0	0	0	0	0	0	1	0
SOUTHWEST RMC											
Wm Beaumont AMC	63	0	0	1	1	0	2	0	0	10	3
FT Huachuca, AZ	6	0	0	0	0	0	0	0	0	0	0
FT Irwin, CA	1	0	0	0	0	0	0	0	0	0	0
NORTHWEST RMC											
Madigan AMC	68	0	0	2	0	1	4	1	0	0	0
FT Wainwright, AK	0	0	0	0	0	0	0	0	0	0	0
PACIFIC RMC											
Tripler AMC	55	0	0	0	1	0	1	0	0	0	0
OTHER LOCATIONS											
Europe	131	1	1	2	15	8	17	0	5	23	0
Korea	72	0	0	0	7	1	0	1	0	2	0
Total	**1229**	**55**	**26**	**16**	**34**	**16**	**53**	**10**	**67**	**94**	**19**

* Based on date of onset.

** Reports are included from main and satellite clinics. Not all sites reporting.

Date of Report: 7-Aug-97

FIGURE I. Selected sentinel reportable diseases, US Army medical treatment facilities*
Cases per month, Aug 95 - Jul 97



* Reports are included from main and satellite clinics. Not all sites reporting.

Date of report: 7-Aug-97

TABLE II. Reportable sexually transmitted diseases, US Army medical treatment facilities* July, 1997

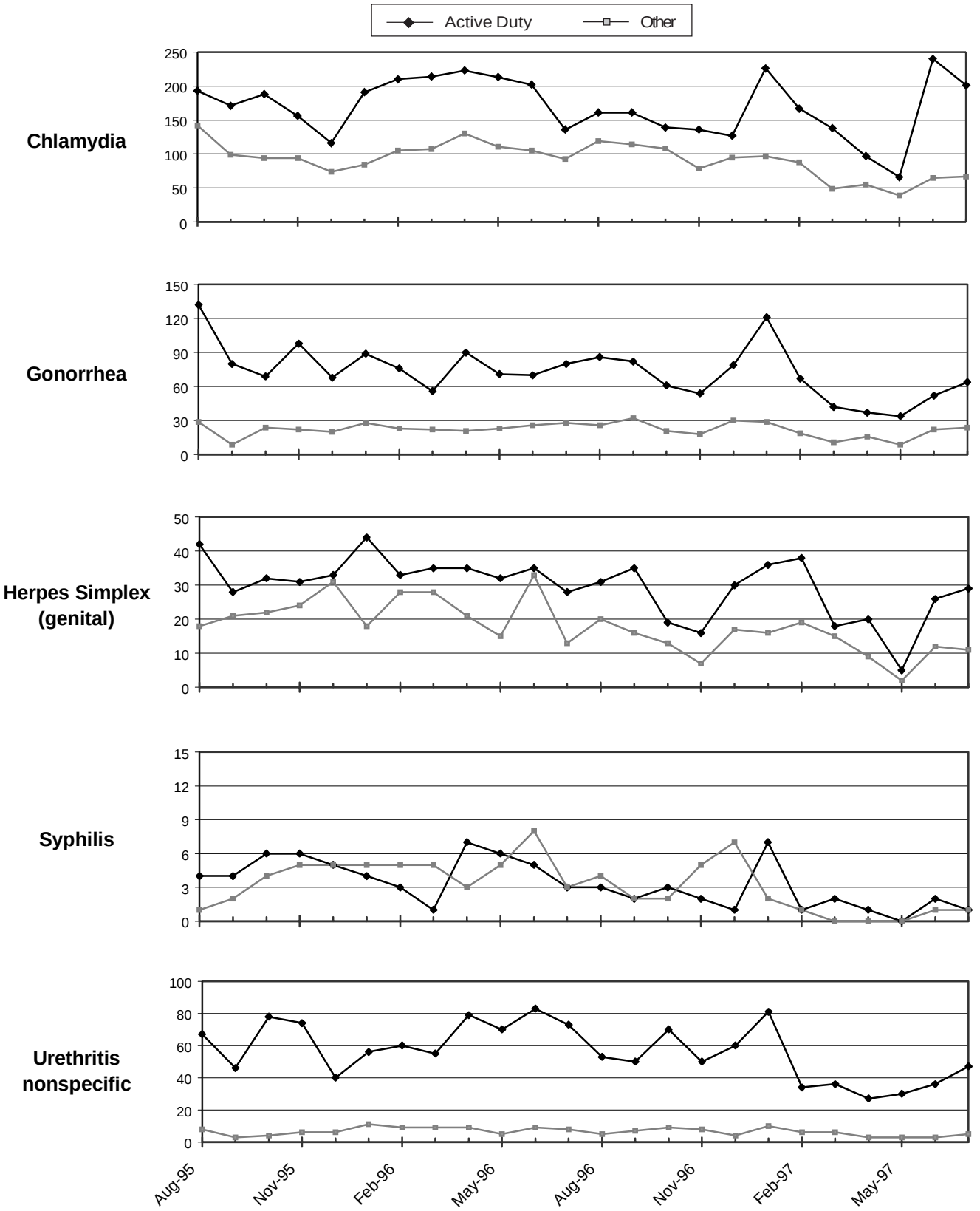
Reporting MTF/Post**	Chlamydia		Urethritis non-spec.		Gonorrhea		Herpes Simplex		Syphilis Prim/Sec		Syphilis Latent		Other STDs**	
	Cur. Month	Cum. 1997	Cur. Month	Cum. 1997	Cur. Month	Cum. 1997	Cur. Month	Cum. 1997	Cur. Month	Cum. 1997	Cur. Month	Cum. 1997	Cur. Month	Cum. 1997
NORTH ATLANTIC RMC														
Walter Reed AMC	2	39	0	6	2	17	3	17	0	1	0	0	0	0
Aberdeen Prov. Ground, MD	3	14	0	1	2	18	0	5	0	0	0	0	0	0
FT Belvoir, VA	0	2	0	0	0	0	0	0	0	0	0	0	0	0
FT Bragg, NC	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FT Drum, NY	0	15	0	4	0	9	0	1	0	0	0	0	0	0
FT Eustis, VA	15	75	0	0	5	11	0	0	0	0	0	0	0	0
FT Knox, KY	8	62	0	0	1	29	1	27	0	0	0	0	0	0
FT Lee, VA	1	15	0	0	0	3	0	0	0	0	0	0	0	0
FT Meade, MD	0	6	0	3	0	1	0	2	0	0	0	0	0	0
West Point, NY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GREAT PLAINS RMC														
Brooke AMC	19	79	0	0	14	30	1	6	0	0	0	0	0	0
FT Carson, CO	11	174	26	161	4	50	3	27	0	0	0	1	0	0
FT Hood, TX	0	233	2	102	2	119	0	28	0	1	0	0	0	4
FT Leavenworth, KS	1	14	0	0	0	5	0	0	0	0	0	0	0	0
FT Leonard Wood, MO	6	51	2	11	3	18	0	0	0	0	0	1	0	0
FT Polk, LA	4	39	0	0	1	11	0	3	0	0	2	2	0	3
FT Riley, KS	15	105	0	0	8	27	0	0	0	0	0	1	0	0
FT Sill, OK	20	102	9	27	8	43	1	9	0	0	0	0	0	3
SOUTHEAST RMC														
Eisenhower AMC	0	55	0	0	0	14	0	31	0	0	0	0	0	7
FT Benning, GA	1	36	0	0	7	40	0	22	0	0	0	2	0	0
FT Campbell, KY	27	168	0	0	16	99	6	18	0	0	0	1	0	1
FT Jackson, SC	63	498§	0	0	0	14	4	35	0	1	0	0	0	2
FT McClellan, AL	1	1	0	0	0	0	0	0	0	0	0	0	0	0
FT Rucker, AL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FT Stewart, GA	0	59	1	86	0	65	0	35	0	0	0	2	1	27
SOUTHWEST RMC														
Wm Beaumont AMC	13	162	0	0	1	18	2	27	0	1	0	1	0	2
FT Huachuca, AZ	0	19	0	0	0	2	0	1	0	0	0	0	0	0
FT Irwin, CA	0	21	0	0	0	5	0	4	0	1	0	0	0	0
NORTHWEST RMC														
Madigan AMC	25	156	11	58	4	46	6	33	0	0	0	0	0	0
FT Wainwright, AK	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PACIFIC RMC														
Tripler AMC	15	68	0	0	7	27	13	45	0	0	0	0	0	0
OTHER LOCATIONS														
Europe	18	327	1	10	3	94	0	19	0	3	0	0	0	1
Korea	0	12	0	0	0	0	0	0	0	0	0	0	0	0
Total	**268**	**2607**	**52**	**469**	**88**	**815**	**40**	**395**	**0**	**8**	**2**	**11**	**1**	**50**

* Reports are included from main and satellite clinics. Not all sites reporting. Date of Report: 7-Aug-97

** Other STDs: (a) Chancroid (b) Granuloma Inguinale (c) Lymphogranuloma Venereum (d) Syphilis unspec. (e) Syph, tertiary (f) Syph, congenital

§ Includes participants in a large-scale ongoing chlamydia study.

FIGURE II. Reportable sexually transmitted diseases, US Army medical treatment facilities*
Cases per month, Aug 95 - Jul 97



* Reports are included from main and satellite clinics. Not all sites reporting.

Date of report: 7-Aug-97

Case report

E.coli O:157:H7, Fort Lewis, Washington

On a recent weekend morning, a three-year-old child became suddenly ill with diarrhea, abdominal pain, and chills. She presented to the emergency room with mild tachycardia and low-grade fever and was rehydrated with intravenous and oral fluids.

The patient is her family's only child. No suspicious illnesses (e.g., diarrhea) were noted among other family members or among children or staff at the child's daycare. The evening prior to her illness, the child ate leftover lasagna that contained thoroughly cooked ground beef and cheese – the meal was heated approximately ten minutes in a microwave oven before it was served. The lasagna was initially prepared and consumed at a local pizza restaurant. The child did not eat fruit, vegetables, or other salad items at the pizza restaurant, and the family did not eat at other restaurants the week prior to the illness. The mother did not recall recent exposures to rare or barbecued meats, fruit juices, or unpasteurized milk.

Within a few days, the child was asymptomatic except for frequent soft stools (one possibly with a small amount of blood)—within a week, her diarrhea had also ceased. A stool culture taken during the child's clinical evaluation confirmed infection with *E. coli* O:157:H7.

Discussion: E. coli O:157:H7 was first identified as a cause of illness in 1982 when an outbreak of bloody diarrhea was linked to the consumption of contaminated hamburger.[1] Between November 1992 and February 1993, in four states of the western US (including Washington), there were four deaths and more that 500 culture-confirmed cases of *E. coli* O:157:H7 related to hamburger served through a chain of fast-food restaurants.[2] Since then, there have been approximately 50 documented outbreaks of *E. coli* O:157:H7 in the US, and the Centers for Disease Control and Prevention estimates that there are as many as 20,000 illnesses attributable to *E. coli* O:157:H7 annually.

Escherichia coli are ubiquitous gram-negative bacteria that are part of the normal enteric flora of many animals, including man. However, in humans, the strain of *E. coli* designated O:157:H7 causes a spectrum of illnesses ranging from asymptomatic infection, to mild cramps and diarrhea, to severe bloody diarrhea, thrombocytopenia, hemolytic anemia, and renal failure. The incubation period ranges from 3-8 days (median: 3-4), and the usual clinical course without specific treatment is 5 to 10 days. Children and the elderly are at greatest risk of severe illness. Hemolytic uremic syndrome (HUS), a life threatening complication of *E. coli* O:157:H7 infection, is the most common cause of acute renal failure in children.

Cattle are the most significant natural reservoir of *E. coli* O:157:H7 since they may carry the bacteria without symptoms. In turn, beef may be contaminated during slaughtering or butchering of infected cattle; dairy products may be contaminated during collection and processing of milk from infected herds; and fruits and vegetables may be contaminated from direct contact with manure-tainted soil (e.g., organic fertilizers). Lakes and streams may also be contaminated by run-offs from pastures, barnyards, or waste disposal systems. Outbreaks of *E. coli* O:157:H7 have been associated with swimming in and drinking sewage-contaminated surface water.

To prevent foodborne outbreaks of *E. coli* O:157:H7, beef should be cooked thoroughly — at temperatures greater than 160°F.— until the pink is gone from the interior, and all juices run clear. Fruits and vegetables should be carefully washed before they are eaten. Dairy products and fruit juices should be pasteurized before they are consumed. Water should be disinfected before it is used for cooking or drinking. To prevent cross-contaminations, food handlers should wash their hands with soap and hot water before handling food and after each use of the restroom; and hands, utensils, and work surfaces should be thoroughly

cleaned after each contact with raw meat or other potentially contaminated items.

Finally, person-to-person transmission can occur by fecal–oral spread, particularly within families and among children in daycare. Thus, daycare staffs should scrupulously follow guidelines for sanitation, infection control, and clinical screening. In particular, hands (especially of children and their caregivers) should be washed with hot, soapy water after each diaper change and each toilet use.

Report submitted by Peter Rumm, MAJ (P), MC, while assigned as Public Health Resident, Preventive Medicine Service, Madigan Army Medical Center, Fort Lewis, Washington; Doctor Rumm is currently Chief, Epidemiology Division, USACHPPM-Europe, Landstuhl, Germany.

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1. Riley, LW, Remis, RS, Helgerson, SD, et al. Hemorrhagic colitis associated with a rare *Escherichia coli* serotype. N Engl J Med, 308, 1983, 681-5.

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Case reports

Adult Respiratory Distress Syndrome (ARDS), Fort Lewis, Washington

Adult respiratory distress syndrome (ARDS) is a term that describes the clinical state of acute hypoxic respiratory failure (with normal levels of carbon dioxide). ARDS has many possible causes including infectious agents, toxins, drugs, metabolic and hematologic disorders, shock, and trauma. Recently, two cases of ARDS of unknown etiology occurred among previously healthy soldiers from Fort Lewis, Washington.

Case 1: On 23 June 1997, a 19-year-old infantryman was treated symptomatically for nausea, vomiting, and diarrhea. The following evening, he presented to the emergency room with fever and respiratory symptoms. A chest x-ray revealed multinodular infiltrates, and he was hospitalized for presumed pneumonia. During the night of admission, he developed respiratory failure and was transferred to the intensive care unit. Before his eventual recovery, his clinical course was characterized by mechanical support of ventilation, fever (>102 degrees), mild thrombocytopenia, hemoconcentration, and radiographic findings characteristic of ARDS. To date, laboratory tests – including serologic tests for Hantavirus — have failed to identify a specific etiology.

The soldier had no underlying conditions known to predispose to or cause ARDS. Of interest, he had returned from a month long field training exercise at a location remote from Fort Lewis approximately one week prior to the onset of his symptoms.

Case 2: On 29 June 1997, a female soldier from Fort Lewis was hospitalized with interstitial pneumonitis, pleural effusion, and hypoxia. She required mechanical ventilatory support. To date, laboratory tests – including serologic tests for Hantavirus – have failed to identify the etiology of her illness. She had no identifiable risk factors for ARDS, but of note, she had participated in the same field training exercise as case 1.

Report submitted by Jeffrey Gunzenhauser, LTC, MC, Preventive Medicine Residency Program Director, Preventive Medicine Service, Madigan Army Medical Center, Fort Lewis, Washington.

Editorial comment: ARDS is infrequently diagnosed among active duty soldiers. These case reports suggest the possibility that the affected soldiers had common exposures to a respiratory pathogen endemic to the site of their recent field training. Epidemiologic and laboratory assessments are planned or underway to assess characteristics of the implicated training areas, document background rates and trends of ARDS among soldiers, and identify potential risk factors and etiologic agents of recent ARDS cases.

Outbreak report

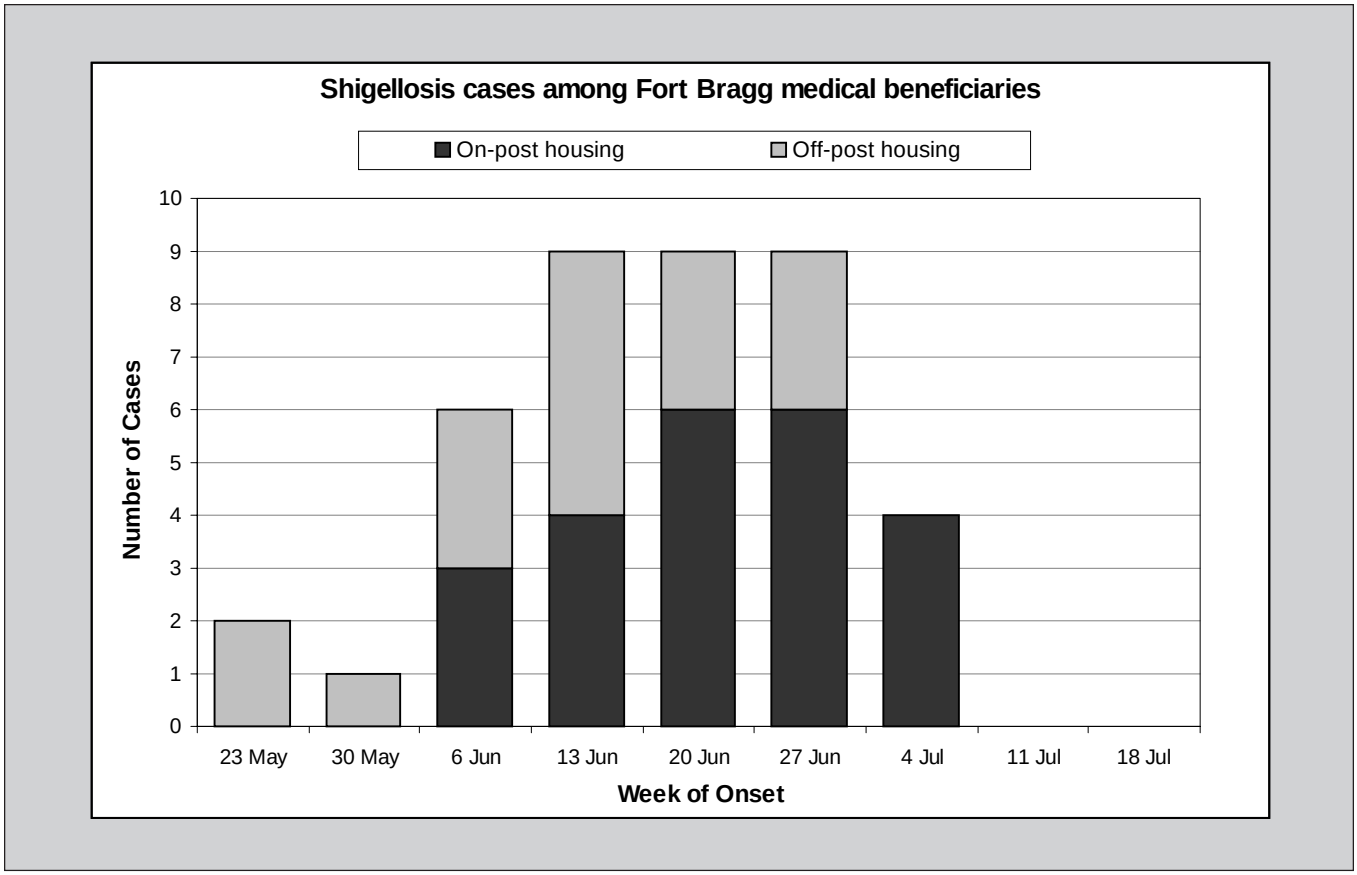
Shigella sonnei, Fort Bragg, North Carolina

Between 23 May and 12 July 1997, 42 isolates of *Shigella sonnei* were obtained from beneficiaries of health care at Womack Army Medical Center, Fort Bragg, North Carolina. Of 42 cases confirmed to date, 40 were symptomatic — 2 were identified based on cultures of asymptomatic family member contacts. Twenty-three (55%) of the 42 cases occurred among persons residing in quarters on Fort Bragg (figure).

To more thoroughly and rapidly assess the geographic distribution of cases and their relative locations over time, a Geographic Information Systems (GIS) software program currently under study in the Fort Bragg Epidemiology and Disease Control Clinic – mainly to enhance sexually transmissible diseases control — was applied to data obtained from the outbreak. With collaborators from the Johns Hopkins School of Hygiene and Public Health, the Fort Bragg staff rapidly determined that nineteen of the 23 on-post cases (83%) were residents of a single housing area – and that all 19 of the geographically-associated cases resided in a single section of the affected area.

Epidemiologic assessments of the affected neighborhood are ongoing, and specific interventions will be guided by the findings. Of note, the large on-post child development facilities have remained free of epidemic disease, most likely due to intensive monitoring and meticulous attention to clinical screening, handwashing, and cleaning practices.

Report submitted by Kelly T. McKee, COL, MC, Chief, Preventive Medicine Service, Womack Army Medical Center, Fort Bragg, North Carolina.



ARD Surveillance Update

Legend

ARD Rate = (ARD cases / Trainees) * 100

SASI* = ARD Rate * Strep Rate**

Ft Benning

Ft Jackson

Ft Knox

Ft Leonard Wood

Ft McClellan

Ft Sill

Figure III. ARD surveillance rates, submitted by Army TRADOC posts

* Strep/ARD Surveillance Index (SASI)

**Strep Rate= (GABHS(+) / Cultures) *100

Note: SASI has proven to be a reliable predictor of serious strep-related morbidity, especially acute rheumatic fever.

Case report

HIV-2, Walter Reed Army Medical Center

At the request of her physician, a patient submitted blood to the laboratory at Walter Reed Army Medical Center for HIV-1 antibody testing. The patient denied histories of intravenous drug use or blood transfusion. She did, however, report a longstanding relationship with a man who had emigrated from Senegal.

In initial testing, the patient's serum reacted with HIV-specific antigens by both EIA and western blot (WB) assays. On the WB, however, antibodies were detected against only one of the two immunodominant glycoproteins in the envelope of HIV-1. A recombinant EIA (rEIA) assay was conducted to enhance the reliability of the final laboratory assessment – the rEIA was negative. The equivocal results were thought to possibly reflect the earliest stages (i.e., seroconversion) of the natural course of HIV-1 infection. To followup, another specimen was requested, drawn, and tested approximately six weeks later.

The second specimen also provided inconsistent results: in duplicate tests run in parallel, the WB was indeterminate (i.e., there were antibodies against some but not all major HIV-1 specific antigens), and the rEIA was both reactive and nonreactive. A polymerase chain reaction (PCR) test to detect genetic sequences of HIV-1 was negative on both the initial and followup samples.

Finally, by both EIA and WB, the patient's serum strongly reacted against HIV-2 specific antigens. In addition, genetic sequences specific for HIV-2 were unequivocally detected by PCR.

Report submitted by Bernice B. Friedman, MA, RNC, Walter Reed Medical Center, Washington, DC

Editorial comment: This report demonstrates the importance of laboratory capabilities to detect and characterize human retroviruses other than HIV-1. Most laboratories in the US and throughout the world would have reported the patient's first specimen as "positive" for HIV-1 (CDC criteria). Fortunately, in this case, the detection of antibodies against only one of the two major envelope glycoproteins of HIV-1 – plus a negative result on the rEIA confirmatory assay — led to further testing and, ultimately, to confirmation of HIV-2, a retrovirus with a more favorable prognosis than HIV-1.

Human immunodeficiency virus, type 2 (HIV-2) is one of the family of retroviruses known to infect humans ("human retroviruses"). HIV-2 is closely related to the prototypic human immunodeficiency virus, HIV-1, the virus responsible for the worldwide pandemic of acquired immunodeficiency syndrome (AIDS). While HIV-1 and HIV-2 share common pathophysiologic mechanisms and clinical consequences, long term studies have shown that adults with HIV-2 progress more slowly to severe immunodeficiency than those with HIV-1.[1]

HIV-1 and HIV-2 also share modes of transmission (i.e., sexual, blood-borne, perinatal). However, unlike HIV-1, HIV-2 has not spread widely beyond its initial endemic focus in West Africa (including Senegal). Indeed, HIV-2 is still uncommon in the United States - as of 31 December 1996, there were only 67 confirmed cases of HIV-2 nationwide, and of these confirmed cases, 47 were known to have been born in West Africa.[4]

Finally, from several research perspectives, it is significant that HIV-2 is less transmissible[2,3] and virulent[1] than HIV-1. Studies are underway to identify the biologic mechanisms that underlie the clinical and epidemiologic differences between these closely related viruses.

Editorial comment submitted by Hee-Choon S. Lee, MAJ, MC, Public Health Resident, Madigan Army Medical Center, Fort Lewis, Washington.

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3. DeCock, KM, Adjorlolo, G, Ekpini E, et al. Epidemiology and transmission of HIV-2. Why there is no HIV-2 pandemic. JAMA, 270:17(Nov 3), 1993, 2083-6.

4. Centers for Disease Control and Prevention. Facts about human immunodeficiency virus type 2. HIV/AIDS Prevention. February, 1997, 1-2.

Supplement #1

HIV-1 in the Army

During 1996, there were 63 active and 21 reserve component soldiers diagnosed with infections with HIV-1 (table S2, page 14). The prevalence (0.23 per 1000) of HIV-1 among active soldiers in 1996 continued the flat trend that has persisted through the 1990s (figure S1). The prevalence of HIV-1 (0.21 per 1000) among 102,288 reserve component soldiers tested was remarkably similar to that among active duty soldiers.

Since most soldiers on active duty were previously screened for and documented as negative for HIV-1 (e.g., pre-induction, routine periodic medical examination), most new diagnoses represent infections acquired on active duty. As during previous years, males and soldiers representing racial/ethnic minorities were overrepresented among those diagnosed with HIV-1 in 1996 (data not shown).

As of March 1997, of 4,688 active and reserve component soldiers diagnosed with HIV-1 infection since routine testing began, nearly one-fourth were known to be deceased and nearly one-fifth were retired from military service. Only 306 soldiers with documented HIV-1 infections remained on active duty (table S3, page 14).

Finally, prevalences of HIV-1 infection among civilian applicants for military service, overall and in each gender and racial/ethnic-defined subgroup, were lower in 1996 than in any other year since routine screening of military applicants began in 1985 (figures S2, S3, page 15).

Table S1. Rates of new diagnoses of HIV-1 infections, Army active duty, 1985 - 1996

Year	Persons Tested	Number of Newly Identified Positives
1985/86	367,372	1040
1987	351,439	407
1988	380,563	189
1989	385,249	172
1990	432,746	145
1991	382,674	135
1992	422,691	125
1993	356,574	91
1994	338,980	65
1995	299,958	67
1996	277,271	63

Figure S1. Rates of new diagnoses of HIV-1 infections, Army active duty, 1985 - 1996

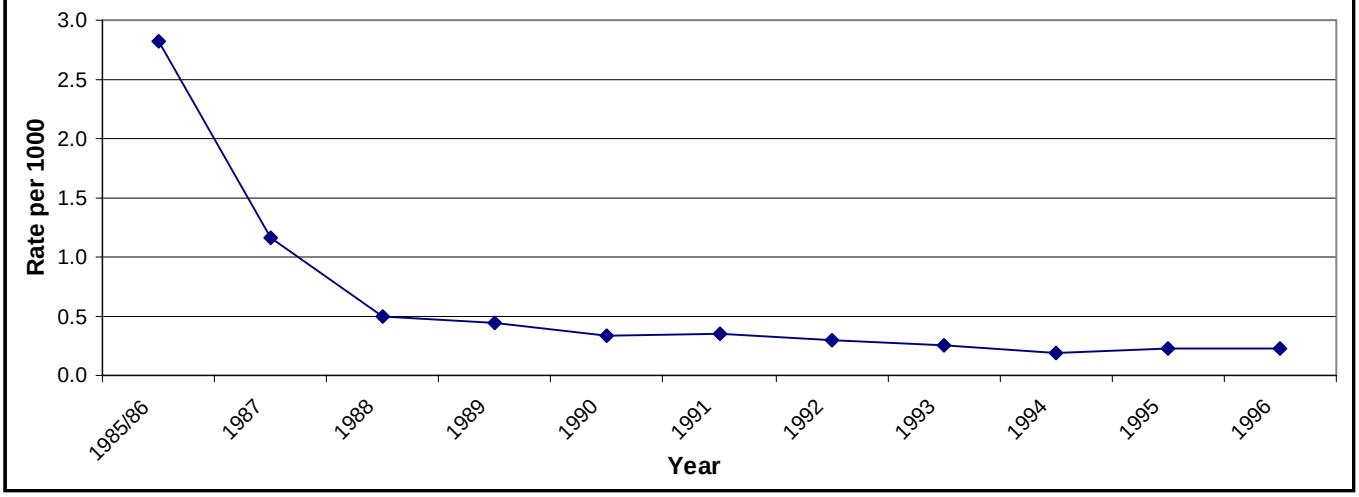


Table S2. HIV-1 tests performed for active duty and reserve component, 1996

Test purpose	Active	Reserve	Total
Clinical / STD	23,166		23,166
Force testing	188,825	109,126	297,951
Physical exam	78,369		78,369
Other / Unknown	46,638		46,638
Total tests	**336,998**	**109,126**	**446,124**
Total persons tested	**277,271**	**102,288**	**379,559**
Number positive	**63**	**21**	**84**
Prevalence per 1000	**0.23**	**0.21**	**0.22**

Table S3. Last known status of Army active duty and AR/NG soldiers infected with HIV-1, 1985-1997

Year diagnosed	Active Duty	Former AD *	AR/NG	Former AR/NG *	Retired**	Deceased**	Total
1985/86	26	277	4	202	329	508	1346
1987	8	95	7	462	155	231	958
1988	7	49	8	180	93	109	446
1989	11	63	7	145	76	98	400
1990	17	75	3	129	58	54	336
1991	20	61	5	111	58	70	325
1992	28	59	9	95	57	33	281
1993	24	40	6	74	35	13	192
1994	39	30	13	47	17	6	152
1995	51	23	12	48	8	1	143
1996	55	9	15	6	1	0	86
1997	20	1	2	0	0	0	23
Total	306	782	91	1499	887	1123	4688

* No longer a benificiary of DoD health care.

** Includes both active duty and AR/NG.

Figure S2. Prevalence of antibody to HIV-1, civilian applicants for US military service, by gender and year of screening, 1986 - 1996

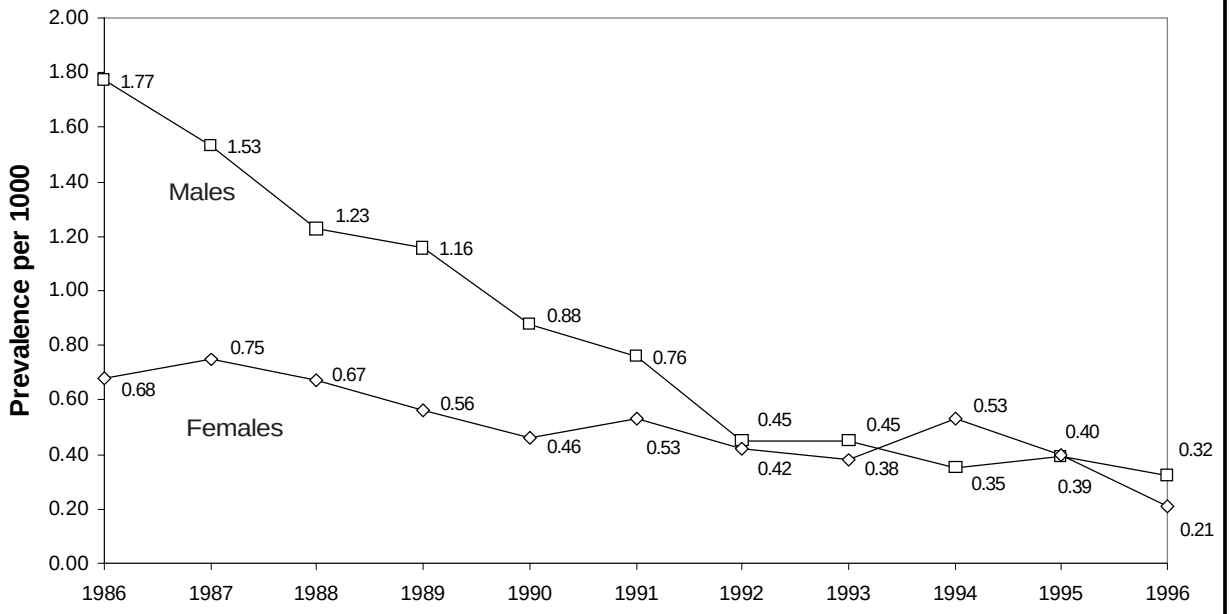
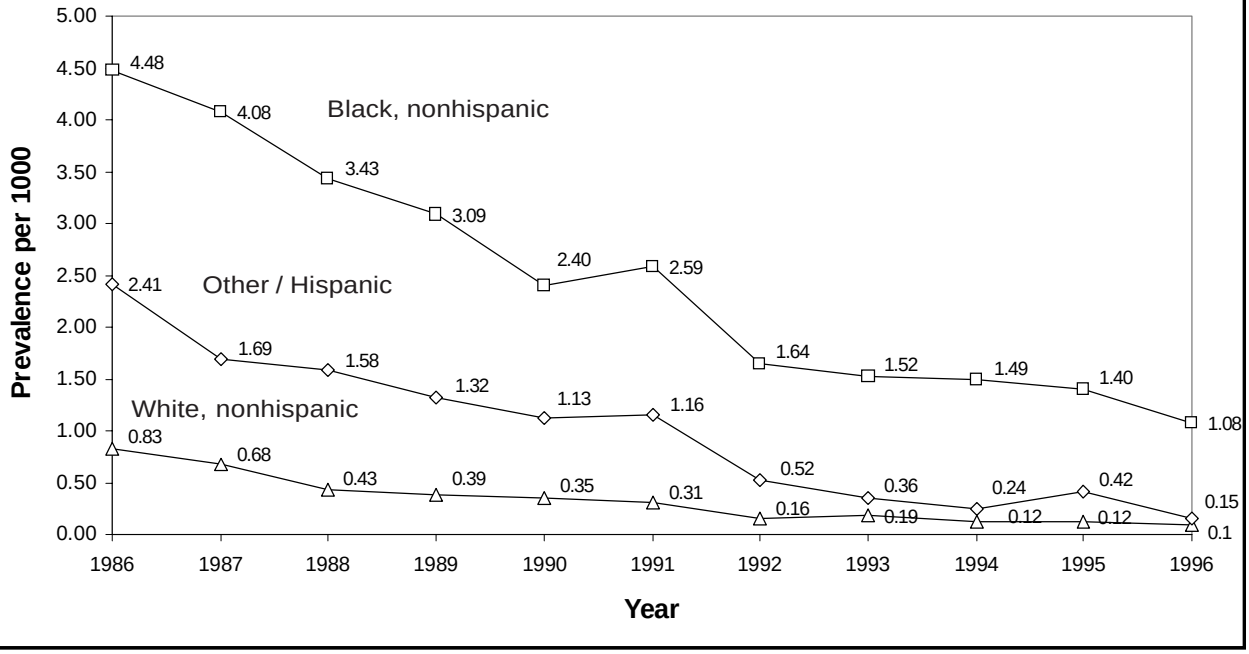


Figure S3. Prevalence of antibody to HIV-1, civilian applicants for US military service by race/ethnicity and year of screening, 1986 - 1996



Supplement #2: Reportables Diseases

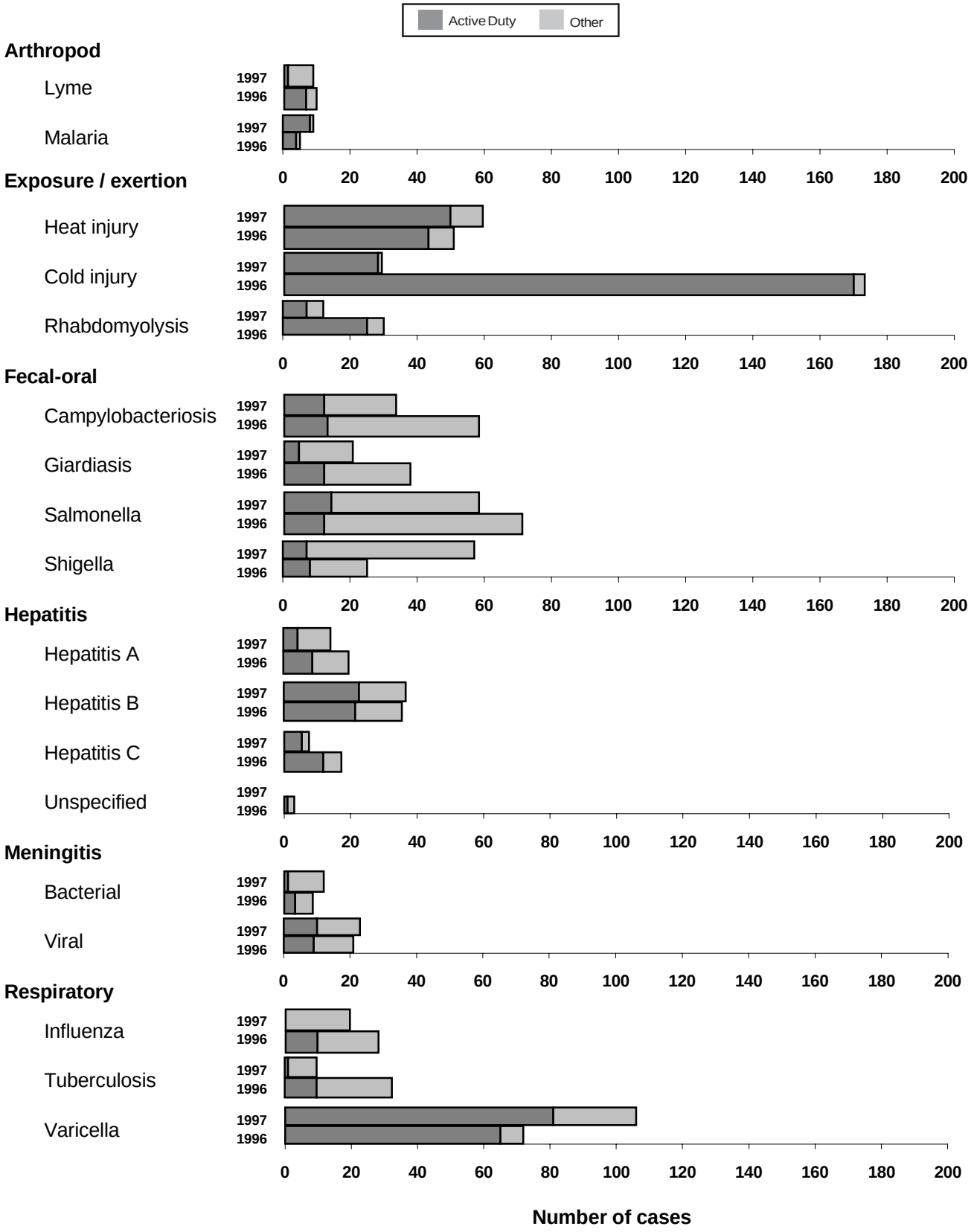
TABLE S1. Reportable conditions reported through Medical Surveillance System, Jan-Jun 1997*

Diagnosis	1st Quarter	2nd Quarter	Total	Diagnosis	1st Quarter	2nd Quarter	Total
Amebiasis	0	0	**0**	Malaria, unspecified	0	5	**5**
Anthrax	0	0	**0**	Malaria, vivax	1	3	**4**
Arboviral fever, unsp.	0	0	**0**	Malaria, falciparum	0	0	**0**
Asbestosis	0	0	**0**	Malaria, malariae	0	0	**0**
Botulism	0	1	**1**	Malaria, ovale	0	0	**0**
Brucellosis	0	0	**0**	Measles	0	4	**4**
Campylobacteriosis	17	14	**31**	Meningitis, Viral	6	19	**25**
Carbon monoxide intx.	4	4	**8**	Meningitis, Bact.	5	6	**11**
Chancroid	0	0	**0**	Mercury intoxication	0	0	**0**
Chemical agent exp.	0	1	**1**	Mumps (adults only)	3	1	**4**
Chlamydia	1186	1153	**2339**	Mycobacterial inf.	1	1	**2**
Cholera	0	0	**0**	Pertussis	2	0	**2**
Coccidioidomycosis	2	1	**3**	Plague	0	0	**0**
CWI, unspecified	1	0	**1**	Pneumococcal pneum.	0	0	**0**
CWI, frostbite	26	0	**26**	Poliomyelitis	0	0	**0**
CWI, hypothermia	0	0	**0**	Psittacosis	0	0	**0**
CWI, immersion type	0	0	**0**	Q fever	0	0	**0**
Dengue fever	0	0	**0**	Rabies, human	0	0	**0**
Diphtheria	0	0	**0**	Radiation injury	0	0	**0**
Ehrlichiosis	0	0	**0**	Relapsing fever	0	0	**0**
Encephalitis	1	1	**2**	Reye syndrome	0	0	**0**
Giardiasis	14	5	**19**	Rhabdomyolysis	7	5	**12**
Gonorrhea	386	341	**727**	Rheumatic fever	0	0	**0**
Granuloma Inguinale	8	2	**10**	Rift Valley Fever	0	0	**0**
Guillain-Barre Syndrome	4	1	**5**	RMSF	0	0	**0**
H. influenzae, inv.	2	3	**5**	Rubella	1	1	**2**
Heat exhaustion	4	34	**38**	Salmonellosis	14	40	**54**
Heat stroke	6	11	**17**	Schistosomiasis	0	0	**0**
Hemorrhagic fever	0	0	**0**	Shigellosis	7	50	**57**
Hepatitis A, Acute	4	9	**13**	Syphilis, unspec.	6	3	**9**
Hepatitis B, Acute	24	10	**34**	Syphilis, prim/sec	6	2	**8**
Hepatitis C, Acute	2	5	**7**	Syphilis, latent	6	3	**9**
Hepatitis, unspec.	0	0	**0**	Syphilis, tertiary	0	2	**2**
Herpes Simplex	195	160	**355**	Syphilis, congenital	1	1	**2**
Influenza	18	0	**18**	Tetanus	0	0	**0**
Kawasaki syndrome	2	0	**2**	Toxic shock syndrome	0	0	**0**
Lead poisoning	1	0	**1**	Toxoplasmosis	0	1	**1**
Legionellosis	0	0	**0**	Trichinellosis	3	0	**3**
Leish, unspecified	0	0	**0**	Trypanosomiasis, Afr.	0	0	**0**
Leish, cutaneous	9	3	**12**	Trypanosomiasis, Amer.	0	0	**0**
Leish, mucocutaneous	0	0	**0**	Tuberculosis, pulminary	4	5	**9**
Leish, visceral	0	0	**0**	Tularemia	1	0	**1**
Leish, viscerotropic	0	0	**0**	Typhoid fever	0	0	**0**
Leprosy	0	1	**1**	Typhus fever	0	0	**0**
Leptospirosis	0	0	**0**	Urethritis, non-specific	210	207	**417**
Listeriosis	0	0	**0**	Vaccine advrs event	0	0	**0**
Lyme disease	4	4	**8**	Varicella,adult only	68	38	**106**
Lymphogranuloma Vnrm	12	14	**26**	Yellow fever	0	0	**0**
				Total	**2284**	**2175**	**4459**

* Based on date of onset.

Date of report: 7-Aug-97

FIGURE S1. Sentinel Reportable Diseases, United States Army*
Comparison of first and second quarters calendar year 1997 to 1996

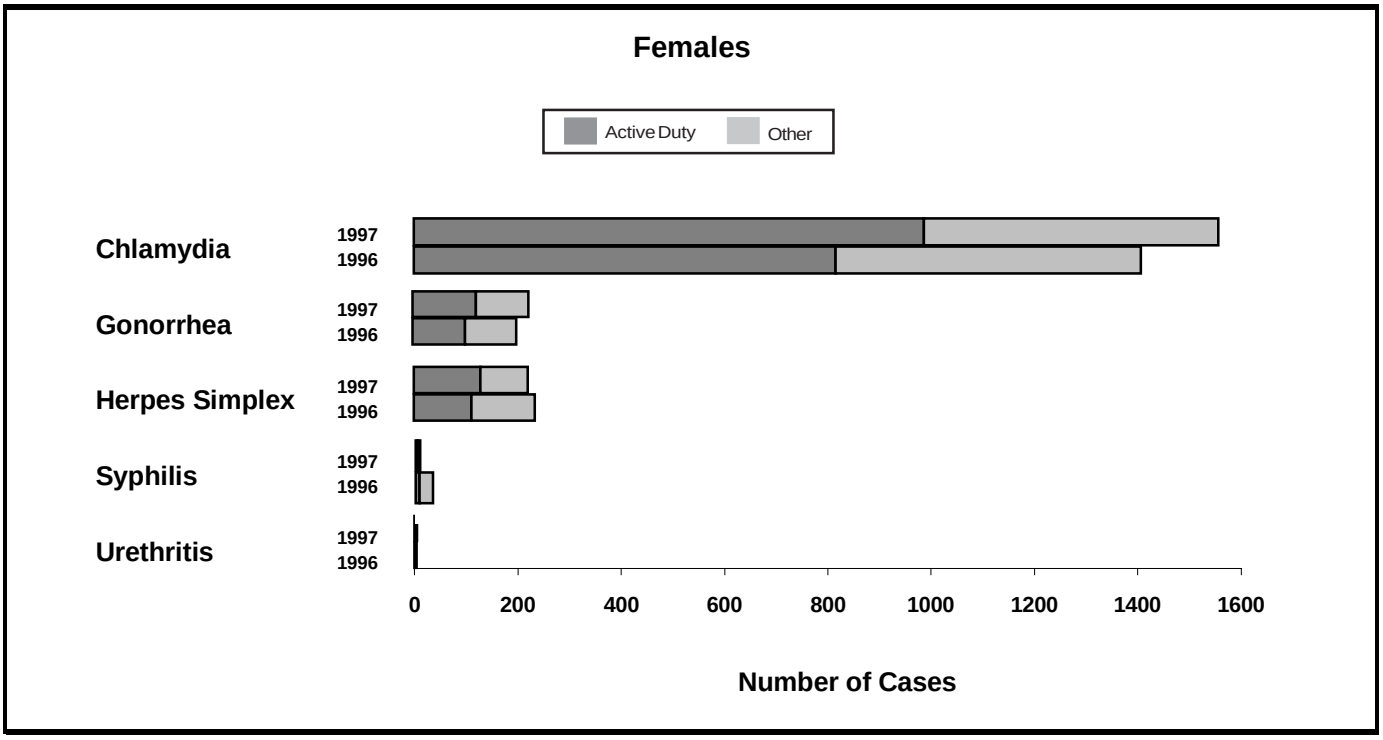


* Based on date of onset.

** Reports are included from main and satellite clinics. Not all sites reporting.

Date of Report: 7-Aug-97

FIGURE S2. Sentinel Reportable STDs, United States Army*
Comparison of first and second quarters, by gender, calendar year 1997 to 1996



* Based on date of onset.

** Reports are included from main and satellite clinics. Not all sites reporting.

Date of Report: 7-Aug-97

TABLE III. Active duty force strength by MTF, United States Army, March, 1997*

MTF/Post**	Males							Females							All
	< 20	20-24	25-29	30-34	35-39	>= 40	Total M	< 20	20-24	25-29	30-34	35-39	>= 40	Total F	
NORTH ATLANTIC RMC															
Walter Reed AMC	161	1284	1446	1581	1857	3229	**9558**	28	395	553	506	472	576	**2530**	**12088**
Aberdeen Prov. Ground, MD	404	654	362	405	436	340	**2601**	108	132	91	61	47	35	**474**	**3075**
FT Belvoir, VA	37	314	364	313	307	360	**1695**	17	98	136	92	80	56	**479**	**2174**
FT Bragg, NC	2032	12015	9421	6626	4212	2378	**36684**	282	1592	1324	715	480	228	**4621**	**41305**
FT Drum, NY	528	3459	2309	1389	944	480	**9109**	72	430	237	129	85	40	**993**	**10102**
FT Eustis, VA	452	1487	1155	963	854	865	**5776**	149	459	319	195	138	98	**1358**	**7134**
FT Knox, KY	1138	2635	1510	1298	1225	748	**8554**	49	191	179	135	93	73	**720**	**9274**
FT Lee, VA	440	846	662	623	484	383	**3438**	255	341	225	176	116	79	**1192**	**4630**
FT Meade, MD	78	765	1068	961	785	940	**4597**	51	279	287	236	199	161	**1213**	**5810**
West Point, NY	26	276	269	687	621	608	**2487**	5	64	68	119	96	76	**428**	**2915**
GREAT PLAINS RMC															
Brooke AMC	323	983	989	1032	825	961	**5113**	279	547	462	373	296	310	**2267**	**7380**
FT Carson, CO	618	3972	3255	2211	1543	794	**12393**	147	583	401	239	145	88	**1603**	**13996**
FT Hood, TX	2258	12567	8963	5726	3971	2323	**35808**	398	2164	1513	873	565	295	**5808**	**41616**
FT Leavenworth, KS	27	277	225	516	870	592	**2507**	22	81	58	81	107	51	**400**	**2907**
FT Leonard Wood, MO	967	1940	1075	1071	845	511	**6409**	463	558	289	177	94	72	**1653**	**8062**
FT Polk, LA	447	2168	1508	1160	744	405	**6432**	103	361	233	136	80	58	**971**	**7403**
FT Riley, KS	887	3418	2081	1378	893	448	**9105**	136	417	243	161	96	55	**1108**	**10213**
FT Sill, OK	1631	4101	2614	1792	1398	797	**12333**	107	372	292	183	110	72	**1136**	**13469**
Panama	95	751	778	704	599	471	**3398**	9	127	133	88	71	37	**465**	**3863**
SOUTHEAST RMC															
Eisenhower AMC	1144	2151	1454	1191	1379	1187	**8506**	307	591	457	374	332	229	**2290**	**10796**
FT Benning, GA	1866	4629	3200	2103	1390	734	**13922**	139	472	366	229	137	69	**1412**	**15334**
FT Campbell, KY	1222	6725	5778	3581	2295	1125	**20726**	181	995	698	409	231	105	**2619**	**23345**
FT Jackson, SC	1007	1676	872	882	645	421	**5503**	735	916	443	307	175	93	**2669**	**8172**
FT McClellan, AL	521	866	522	587	494	396	**3386**	191	262	179	111	98	51	**892**	**4278**
FT Rucker, AL	79	598	925	617	503	442	**3164**	50	146	127	78	60	34	**495**	**3659**
FT Stewart, GA	1110	6125	4478	2732	1902	1031	**17378**	183	976	717	346	221	93	**2536**	**19914**
SOUTHWEST RMC															
Wm Beaumont AMC	509	2131	1641	1207	1152	1098	**7738**	137	586	388	213	150	166	**1640**	**9378**
FT Huachuca, AZ	276	1085	1059	785	669	483	**4357**	146	376	228	172	134	87	**1143**	**5500**
FT Irwin, CA	162	1249	901	773	517	306	**3908**	26	172	111	77	42	27	**455**	**4363**
NORTHWEST RMC															
Madigan AMC	875	5054	4083	2867	1982	1337	**16198**	184	843	666	374	278	186	**2531**	**18729**
FT Wainwright, AK	294	1921	1661	1007	628	323	**5834**	52	293	222	156	105	48	**876**	**6710**
PACIFIC RMC															
Tripler AMC	767	3988	3480	2290	1509	1035	**13069**	124	696	666	405	317	202	**2410**	**15479**
OTHER LOCATIONS															
Europe	1516	11016	10721	7492	5631	3707	**40083**	314	2176	1851	1192	908	520	**6961**	**47044**
Korea	2087	8149	6017	4371	3400	2104	**26128**	538	1553	1094	689	494	283	**4651**	**30779**
Unknown	1793	9031	8657	9198	6810	4444	**39933**§	602	1771	1407	1175	800	432	**6187**§	**46120**§
Total	**27777**	**120306**	**95503**	**72119**	**54319**	**37806**	**407830**	**6589**	**22015**	**16663**	**10982**	**7852**	**5085**	**69186**	**477016**

* Based on duty zip code. Does not account for TDY.

** Includes any subordinate catchment areas not listed separately.

§ Includes unknown age groups and unknown gender.

Source: Defense Manpower Data Center (DMDC)

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